## **BC700/701** series

# AUTOMATIC BATTERY CHARGERS 3 AMP CONSTANT CURRENT

The Modex range of 3 Amp constant current chargers provide for the fully automatic monitoring and charging of standby diesel generator battery packs.

The advantages of this type of charger are primarily:-

- Rapid recovery of battery charge, equivalent to a considerably higher rating 'taper' type charger.
- Protection from overcharging. The unit switches off automatically once the batteries are fully charged.
- Prolonged battery life, from the reduction of gassing and continual exercising of the cells.

When connected, the charger measures the battery terminal voltage. If this is below a pre-calibrated threshold, the unit outputs a series of charge pulses to the battery, regulating the average current to a constant 3 Amps.

Between charge pulses, the BC700 continues to monitor the battery terminal voltage. When the measured voltage has climbed to a suitable threshold the charger turns off, allowing the battery to decay back to the lower voltage threshold before the cycle is repeated. The 'switch off' and 'switch on' voltage thresholds are factory calibrated according to the type of battery used:—

	BC700 (12 V)			BC701 (24 V)		
	Lead	Ni-Cd		Lead	Ni-Cd 18 cell 20 cell	
Calibration:	Acid	9 cell	10 cell	Acid	18 cell	20 cell
Normal operation: Switch on, VDC Switch off, VDC	12.6 13.7	12.3 13.2	13.8 14.8	25.4 27.4	24.7 26.6	27.6 29.5
Boost operation: Switch on, VDC Switch off, VDC	14.9 15.7	13.6 14.5	15.0 15.9	29.5 31.5	27.2 28.9	29.9 31.9

The rate of the charge/decay cycle depends on the capacity and condition of the battery and the static load across it (the charger itself presents negligible load).

The 'boost' mode of operation may be selected by linking two terminals, either through a remote panel switch, relay or timer. This increases the switch on and switch off voltage thresholds, and may be used for short periods to increase the battery charge level.

The charge cycle state is indicated by two LEDs: amber for 'on charge' and green for 'charge complete'. Two –ve DC (open collector transistor) outputs are provided for the remote signalling of 'on charge' and 'charger fail' conditions.

The BC700 series uses an open-chassis, metal cased design, suitable for bolt or stud mounting in an enclosed panel. Electrical connection is by ¼" blade terminals on the main PCB.

#### When ordering, please specify:-

- a) Product type: BC700 (12V) or BC701 (24V)
- b) Battery type: lead acid, or number of Ni-Cd cells, or special calibration requirements

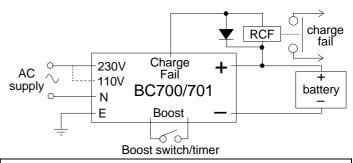
#### Accessories:-

CVT502/506 Battery voltage trips, DIN rail mounted CVT102/106 Battery voltage trips, 11 pin plug-in

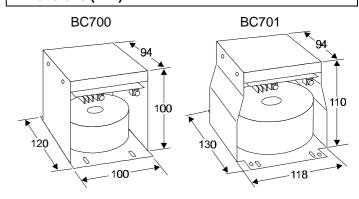


Power supply:	BC700	BC701			
Nominal voltages	110 or 230 V AC (pin selectable)				
Voltage ranges Frequency range	95 – 135 V AC or 190 – 270 V AC 45 – 65 Hz.				
Power consumption	< 80 VA	< 160 VA			
DC charge output:					
Charge current	3 Amps				
Switch off threshold range	13.0 – 15.9 V DC	26.1 – 31.9 V DC			
Switch on/off hysteresis	approx. 1 V DC	approx. 2 V DC			
Charge fail output:					
Type/rating	<ul> <li>ve DC (open collector transistor) max. 150 mA @ 33 V DC</li> </ul>				
General:					
Weight Ambient temperature range EMC emission/immunity	approx. 1.75 kg -10 to to EN50081-				

### Connection



#### **Dimensions (mm)**





Frank W. Murphy Ltd. Incorporating Modex Automation Church Road, Laverstock. Salisbury U. K. Telt: + 44 1722 410055 Fax + 44 1722 410088 Pour service en Français, telt: + 44 1722 410697 email: saless@murphy.co.uk web: http://www.fwmurphy.co.uk

Frank W. Murphy Ltd. en France Tel: +33 (1) 30 76 26 26 Fax: +33 (1) 30 76 39 89 Direct usine Tel: + 44 1722 410697 email: sales@fwmurphy.co.uk

emair: salesewimurphy.co.ux Frank W. Murphy Pte, Ltd. No. 2 Tuas Soulh Street 2, Sprintecs Building 02-01/02, Singapore 637895 Tel: +65 863 1398 Fax: +65 863 0208 email: fwmsales@fwmurphy.com.sg Frank W. Murphy Southern Division PO Box 1819, Rosenberg, Texas 77471, USA Tel: + 1 281 342 0297 Fax: + 1 281 341 6006 email: sales@fwmurphy.com

Murphy Switch of California PO Box 900788, Palmdale, California 93590, USA Tel: +1 805 272 4700 Fax: +1 805 947 7570 email: sales@murphyswitch.com web: http://www.murphyswitch.com

Murphek Pty. Ltd.
1620 Hume Highway, Campbellfield, Vic. 3061 Australia Tet. + 61 3 9358 5555 Fax: + 61 3 9358 5558 email: murphy@macquarie.com.au

Murphy de Mexico S.A. de C.V. Blvd. Antonio Rocha Cordero 300, Fracción del Agua San Luis Potosi, S.L.P. México 78384 Tel: +52 48 206264 Fax: +52 48 206336